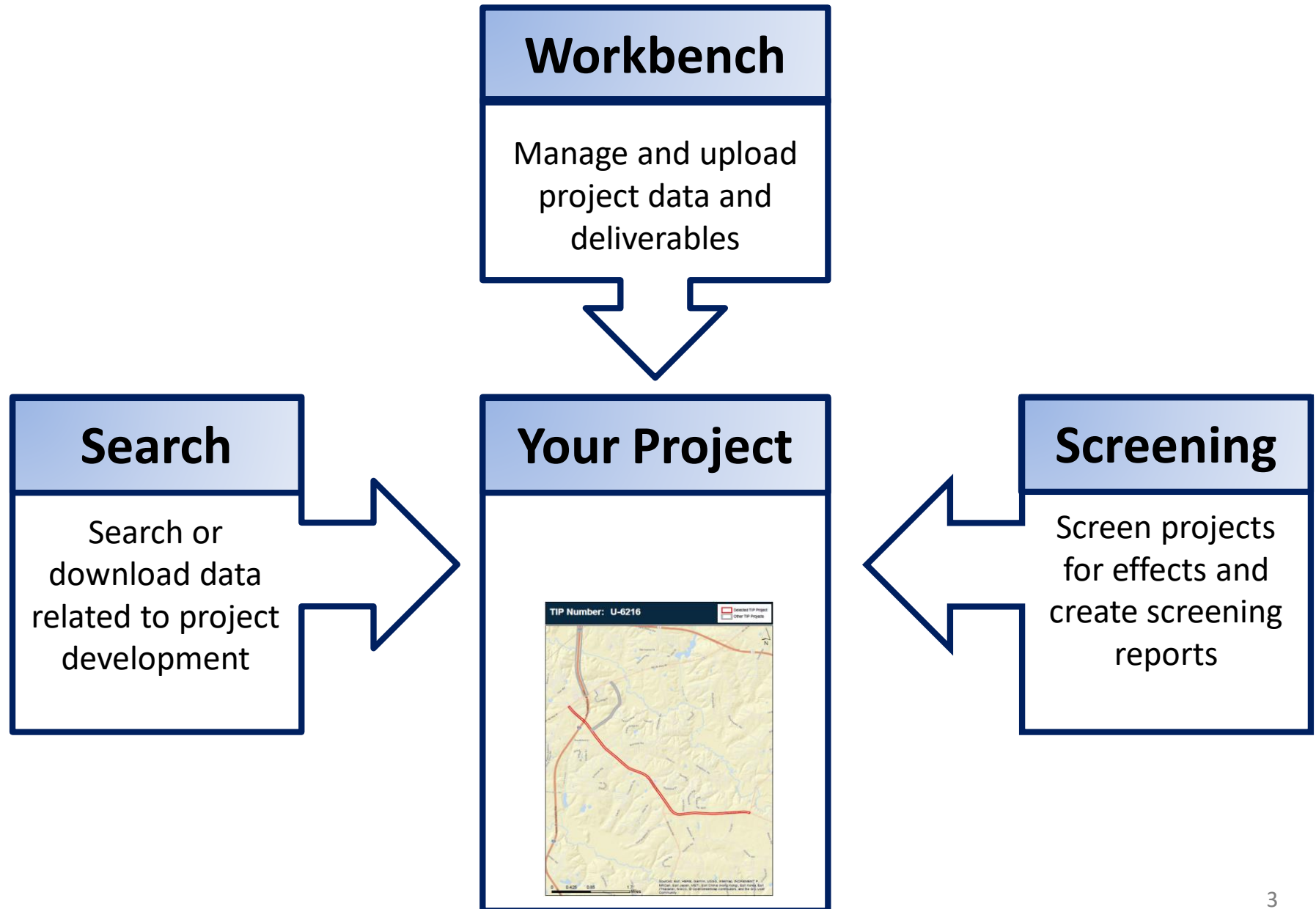**NORTH CAROLINA**
Department of Transportation

Project ATLAS

ATLAS
Class Objectives

- Learn the functionality of the three ATLAS Tools

- Discover what they can do to help your process/ program/discipline

- Become confident with ATLAS and begin using it to improve project development

Workbench

Manage and upload project data and deliverables

Search

Search or download data related to project development

Your Project

TIP Number: U-6216

Screening

Screen projects for effects and create screening reports

3

Data and Search Overview

ATLAS GIS Data

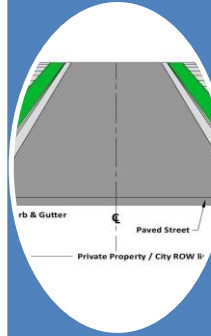| Wetlands & Streams | Protected Species | Historic Resources | Traffic | Community Studies | Bike & Ped | Right of Way | Utilities |

GIS

ATLAS GIS Data: Connections and Ownership

- Pulling multiple data sources into a single location via web services

• NCDOT	• USDA
• USGS	• US Commerce
• NC CGIA	• ESRI
• NC DEQ	• NC Ag
• NOAA	• US DOT
• NC DHHS	• NC WRC
• US EPA	• Local Gov'ts
• NC SHPO	• Others…
• USFWS	

New Data

- Examples of new reference layers:
  - NC IPaC
  - NC Mines
  - NC Childcare
  - NC Medical Facilities
  - NC Places of Worship

- Examples of new project data layers:
  - Archaeological Area of Potential Effect
  - Bat Bridges
  - CCR Direct Community Impact Area
  - Noise Monitoring Sites
  - Geo Environmental Phase 1 Sites of Concern
  - ICE Impervious Surface Mapping

… many more will be available, with more coming soon!

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Search Tool

What the tool does for you:

- Review and download data from multiple sources at once
- Establish consistency on data sources being used across project teams for the same deliverables and decisions

Search Tool – Demo

Search Tool – Exercise

Search Tool Exercises

- As a Group – App Walkthrough
- Independently – Search by Uploading a Study Area
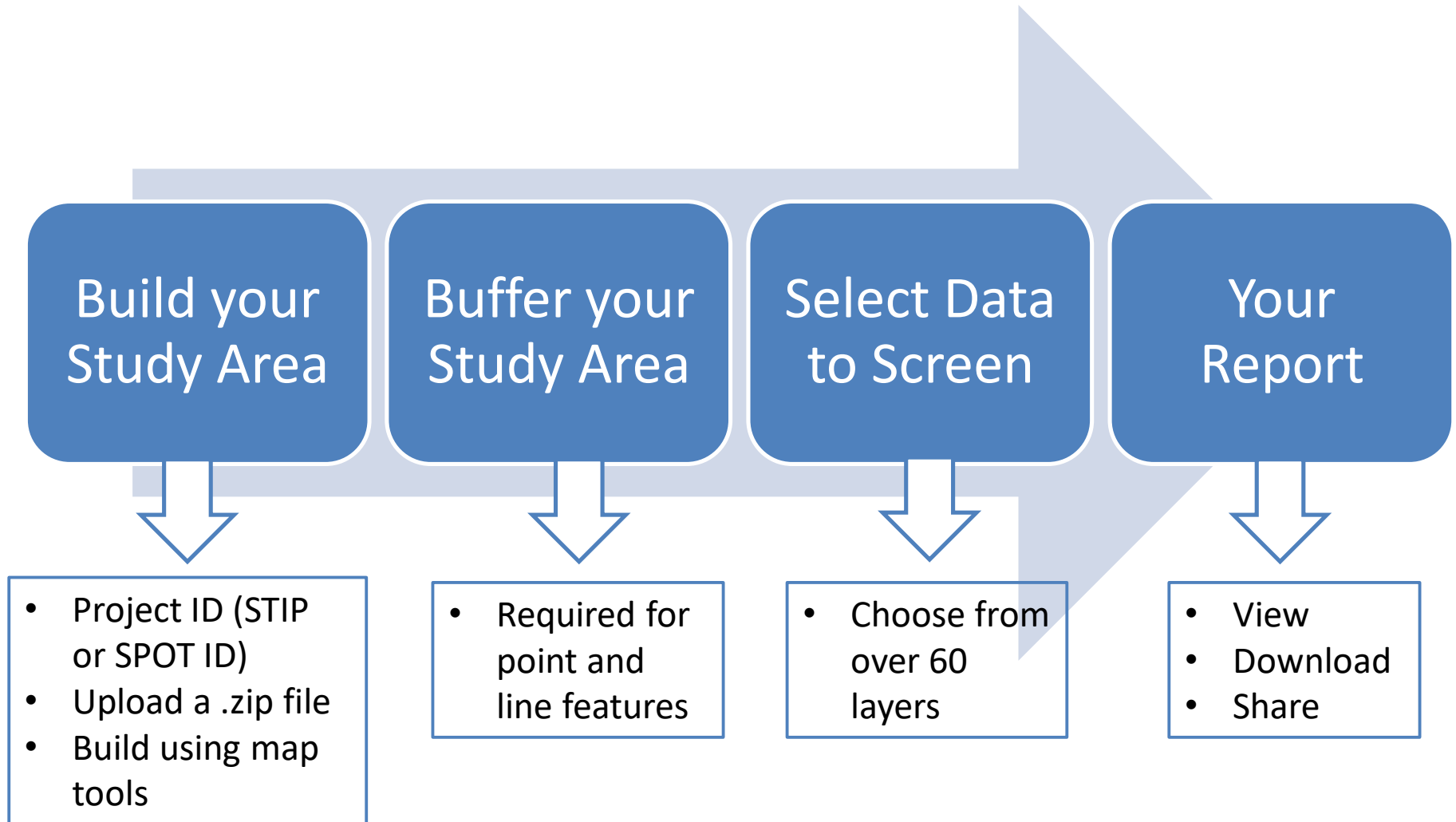- Independently – Search by Predefined Boundary

Screening Overview

Screening Tool

What the tool does for you:

- Provides high-level summary report on key GIS layers/features in your study area
- Downloads of GIS datasets with features in your study area

How to Build a Screening

| Build your Study Area | Buffer your Study Area | Select Data to Screen | Your Report |

- Project ID (STIP or SPOT ID)
- Upload a .zip file
- Build using map tools

- Required for point and line features

- Choose from over 60 layers

- View
- Download
- Share

Screening Report: How to Read

Project Development Screening Report

|	
Report Date: 06/12/2019	**County:** Forsyth
	Division: 9
Training Example	**EPA Level III Ecoregion:**
	Piedmont
ATLAS Screening Report for Training	**EPA Level IV Ecoregion:**
	Southern Outer Piedmont, Northern Inner Piedmont
	HUC8: 03040101
	CAMA: No
	Riparian Buffer: N/A

Screening Report: How to Read

Study Area Size: 2595.3 Acres

Buffer Size: 1000 Feet

STIP/SPOT ID: U-2826, H090370

STIP/SPOT Description:

U-2826: SOUTH OF SR 2747 (CLEMMONSVILLE ROAD) TO FUTURE I-74 (WINSTON-SALEM NORTHERN BELTWAY). ADD LANES.
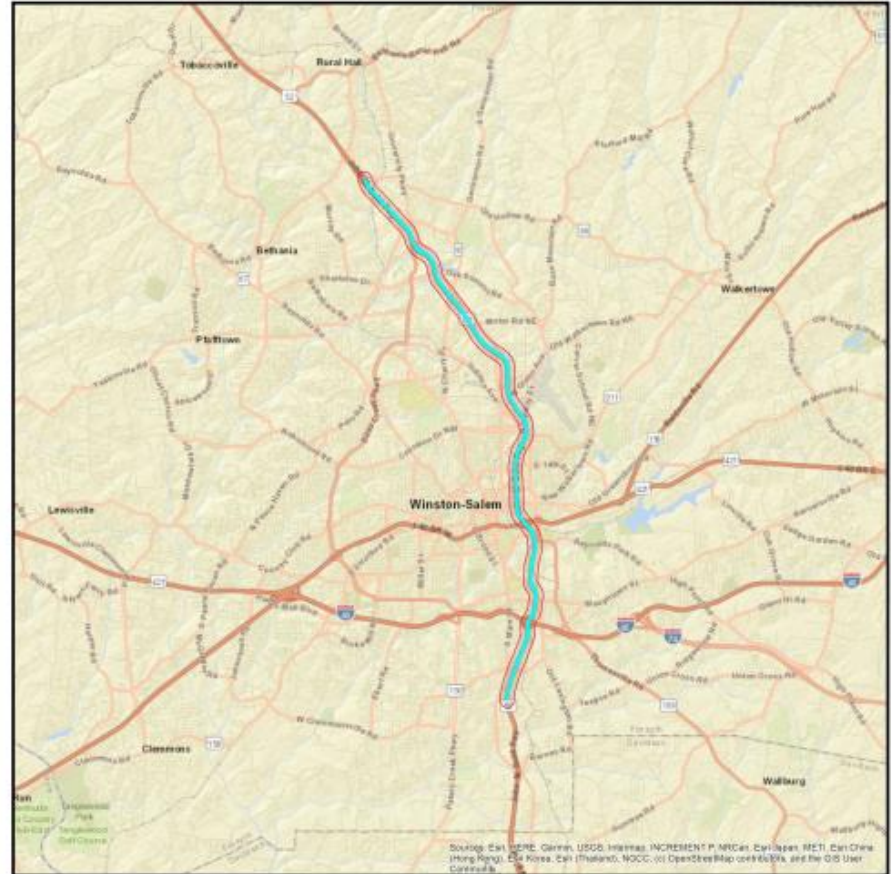
Screening Report: How to Read

Summary of Results	
Category	**Result**
Community	Yes
Conservation Area	Yes
Design Complexity	No

Fish and Aquatics	Yes
Geo Environmental	Yes
Historic Architecture and Archaeology	Yes
Hydrography	Yes
Mitigation	No
Physiography	Yes
Public Property	Yes
Threatened and Endangered	No
Transportation	Yes
Utilities	Yes
Water Quality	Yes
Wetlands	Yes

Screening Report: How to Read

Human Environment			
Community	**Feature Count**	**Total Coverage**	**Nearest Feature**
US HUD Public Housing Building	50	N/A	11.7 ft
US DHS HIFLD Day Care Centers	3	N/A	112.3 ft
North Carolina Public Schools	2	N/A	10.9 ft
NC Colleges and Universities	1	N/A	736.9 ft
NC Public Libraries	1	N/A	8.9 ft
US DHS HIFLD Manufactured Home Parks	1	N/A	701.2 ft
NC DEQ DWR Animal Operation Permits	0	0	N/A
NC Hospitals	0	0	0
NC Multi Hazard Threat Database Community Colleges	0	0	0
NC Multi Hazard Threat Database Nuclear Power Plants	0	0	0
NC Multi Hazard Threat Database State Prisons	0	0	1461.4 ft
NC Non Public Schools	0	0	279.5 ft

Screening Report: How to Read

Natural Environment			
Conservation Area	**Feature Count**	**Total Coverage**	**Nearest Feature**
NC Heritage Program Managed Areas	1	23.2 ac	990.1 ft
National Conservation Easement Database	0	0 ac	1505.0 ft
NC Critical Areas	0	0 ac	0
NC DEQ CAMA Counties (DCM List)	0	0 ac	N/A
NC DEQ DCM Coastal Reserve Boundary	0	0 ac	0
NC DEQ Oceanfront Setback Factors	0	0 ac	0
NC DEQ Outstanding Resource Water Management Zones	0	0 ac	0
NC DEQ Primary Fish Nursery Areas	0	0 ac	0
NC DEQ Unique Wetlands	0	0 ac	0
NOAA Marine Protected Area	0	0 ac	0
USFWS National Wildlife Refuges	0	0 ac	0

Screening Report: How to Read

Report Metadata

Created by: AtlasUser1   **Date/Time Executed:** 06/12/2019 4:32 PM

Report Disclaimer:

While the N.C. Department of Transportation strives to provide complete and accurate information, the data provided in this screening report are reported "as is." This report does not replace field data collection and data verification conducted by licensed professionals. No warranty is expressed or implied regarding the accuracy of available data for general or scientific purposes. NCDOT shall under no circumstances be responsible for any errors or omissions which may occur in these records, nor liable for any actions taken as a result of reliance upon any information contained within this web site from whatever source, or any consequences from such reliance.

How to read this report:

User-defined Project Study Area = The final polygon that the user created in the Screening Tool. This study area includes any buffers the user added within the application.

Layer Name = Layer selected for Screening. You may click the hyperlink to access additional layer details.

Field Name = Calculated result for a specific field within a layer that was selected for Screening (using Set Field).

Feature Count = Number of unique features (points, lines, and/or polygons) from a particular GIS layer that are within or intersecting the user-defined project study area.

Total Coverage = Total number of linear feet (lines) or area (polygons) from a particular GIS layer that are contained within the user-defined project study area. N/A under Total Coverage refers to point layers as point layers cannot have coverage.

Nearest Feature = Distance from the boundary of the user-defined project study area to next closest feature (point, line, or polygon) for a particular GIS layer within the vicinity (1 mile) of the project study area boundary. Zero (0) under Nearest means there are no features in the project vicinity (1 mile buffer).

Screening Report: How to Read

Availability of Web Services:

The layers referenced in this report utilize web services. If any web services were unavailable at the time of the report execution, related errors are noted in the following table:

Service Name	Service Url	Error Thrown
Blue Ridge Forever Appalachian Trail Centerline	https://services1.arcgis.com/PwLrOgCfU0cYShcG/ArcGIS/rest/services/Appalachian_Trail_centerline/FeatureServer/0	URLError: No connection could be made because the target machine actively refused it
NC Natural Heritage Natural Areas (NHNA)	https://services.nconemap.gov/secure/rest/services/NC1Map_Habitat/FeatureServer/2	Invalid Token
NC Shellfish Growing Area Classifications	https://services.nconemap.gov/secure/rest/services/NC1Map_Habitat/FeatureServer/3	Invalid or missing input parameters.
NOAA Marine/Estuarine Aquatic Bed, Rooted Vascular (Submersed Rooted Vasculars, SRV)	https://coast.noaa.gov/arcgis/rest/services/MarineCadastre/Seagrasses/MapServer/0	Error handling service request :0x80004005 - Unspecified error
TVA Land Plans (EGISMap)	https://egismaps.tva.gov/arcgis/rest/services/Land_Plans/MapServer/0	URLError: No connection could be made because the target machine actively refused it

Break!

Screening Tool – Demo

Screening Tool – Exercise

Screening Tool Exercises

- Break into 3 groups:
  - Transportation
  - Hydrography
  - Water Quality

- Independently complete (help each other and ask for help ☺):
  - Screen a STIP Project
  - Screen an Upload
  - Screen a Drawn Feature

- Small groups report out to all on things you noticed

Questions or Comments?

Lunch

Workbench Overview
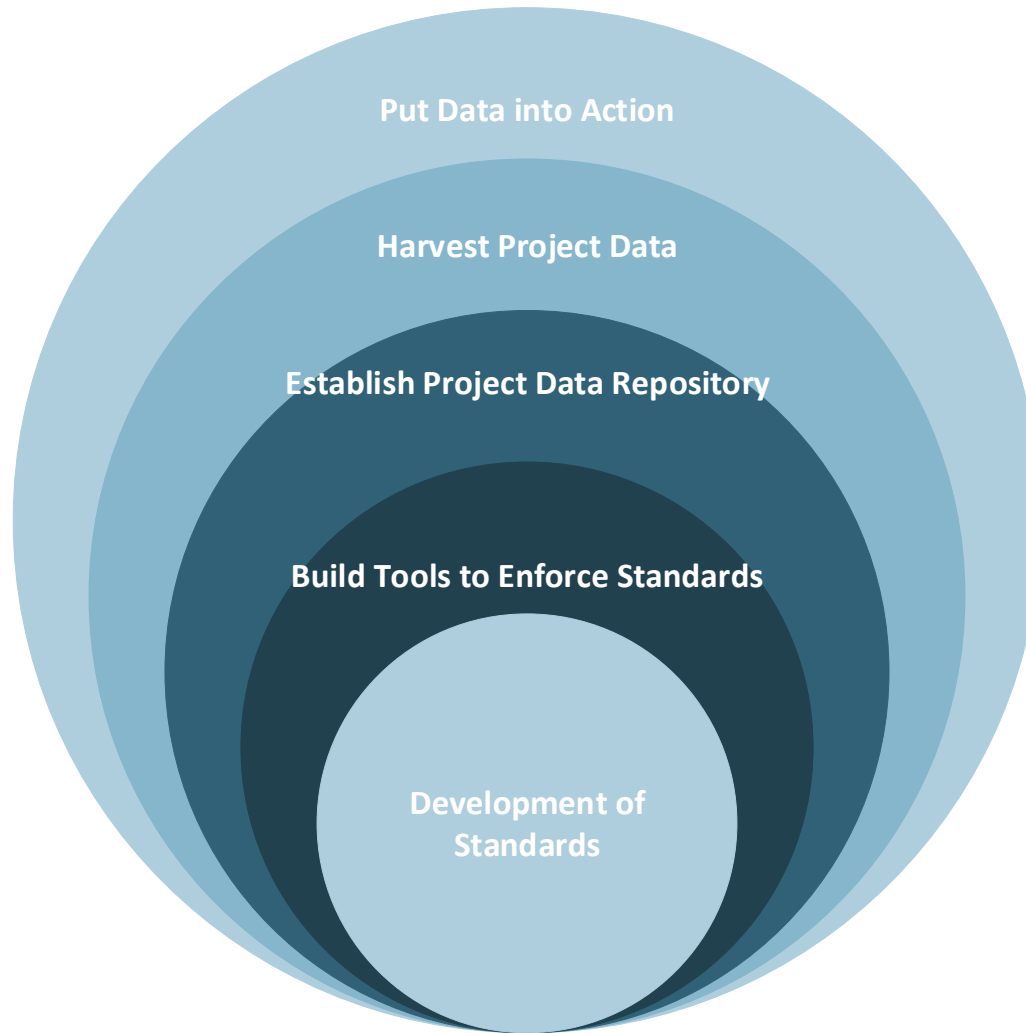
ATLAS Workbench

- Key Functionality
  - Integration with SharePoint (Scoping and PreConstruction)
  - Ingestion of standard deliverable data (PDF and spatial data deliverables)
  - View your project within the context of surrounding projects and data for those projects
  - Flexible in conjunction with policy changes

Workbench

What the tool does for you:

- One place to upload data
- Uploaded data is instantly visible on the Workbench Map
- Track project progress
- Run reports

Workbench – Snowball Effect

Put Data into Action

Harvest Project Data

Establish Project Data Repository

Build Tools to Enforce Standards

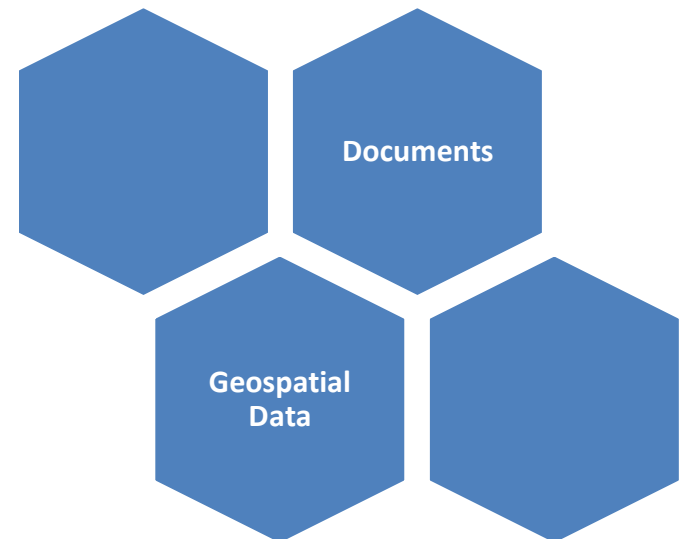Development of Standards

Standards and Uploads

https://connect.ncdot.gov/resources/Environmental/Pages/NES-Procedures-Manual.aspx
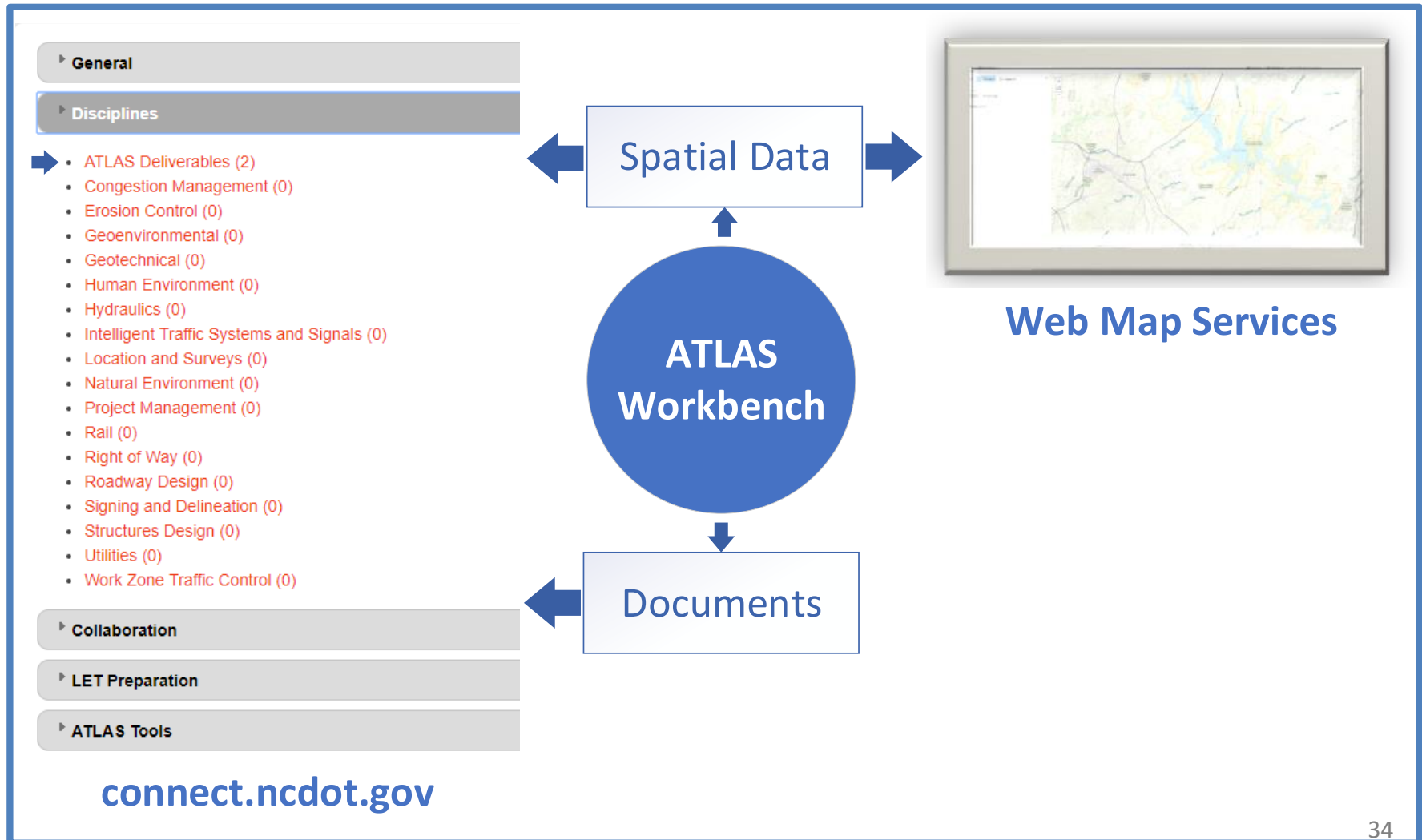
Standards

Standards allow for better management, sharing and integration of data across the many subject areas.

<u>Subject Areas</u>:

- Feasibility
- Public Involvement
- Survey and Photogrammetry
- Traffic
- CCR
- NRTR

- ICE/LUSA
- Air Quality
- Traffic Noise Analysis
- Cultural Resources
- Geo-Environmental
- CIA

Documents

Geospatial Data

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Workbench – Data Flow

General

Disciplines

- ATLAS Deliverables (2)
- Congestion Management (0)
- Erosion Control (0)
- Geoenvironmental (0)
- Geotechnical (0)
- Human Environment (0)
- Hydraulics (0)
- Intelligent Traffic Systems and Signals (0)
- Location and Surveys (0)
- Natural Environment (0)
- Project Management (0)
- Rail (0)
- Right of Way (0)
- Roadway Design (0)
- Signing and Delineation (0)
- Structures Design (0)
- Utilities (0)
- Work Zone Traffic Control (0)

Collaboration

LET Preparation

ATLAS Tools

Spatial Data

ATLAS Workbench

Web Map Services

Documents

connect.ncdot.gov

Workbench – Demo

Workbench Exercise

Workbench Exercise

- Break into 4 groups:
  - NRTR
  - Cultural Resources
  - CIA
  - ICE/ICI

- As a small group complete (ask for help ☺):
  - All required questions and uploads for your assigned group (see training data folder with sample documents and data!)

- Independently complete:
  - Map Functionality Exercise

- As a whole group:
  - When complete, we will review Workbench statuses and look at our uploaded data on the Map

Break!

Data, data and more data

Policy and Use

NCDOT ATLAS Policy

- **Purpose**
  - Integration of ATLAS tools into daily work
    - IPD will be updated to include ATLAS tools and processes

- **Benefits**
  - Use tools to identify project constraints
  - Build and provide access to data repository
  - Communicate with stakeholders
  - Manage projects more efficiently
  - Consistency

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NCDOT ATLAS Policy

- **Who is it for?**
  - Project managers
  - Technical staff
  - Subject Matter Experts
  - Management

NCDOT ATLAS Policy
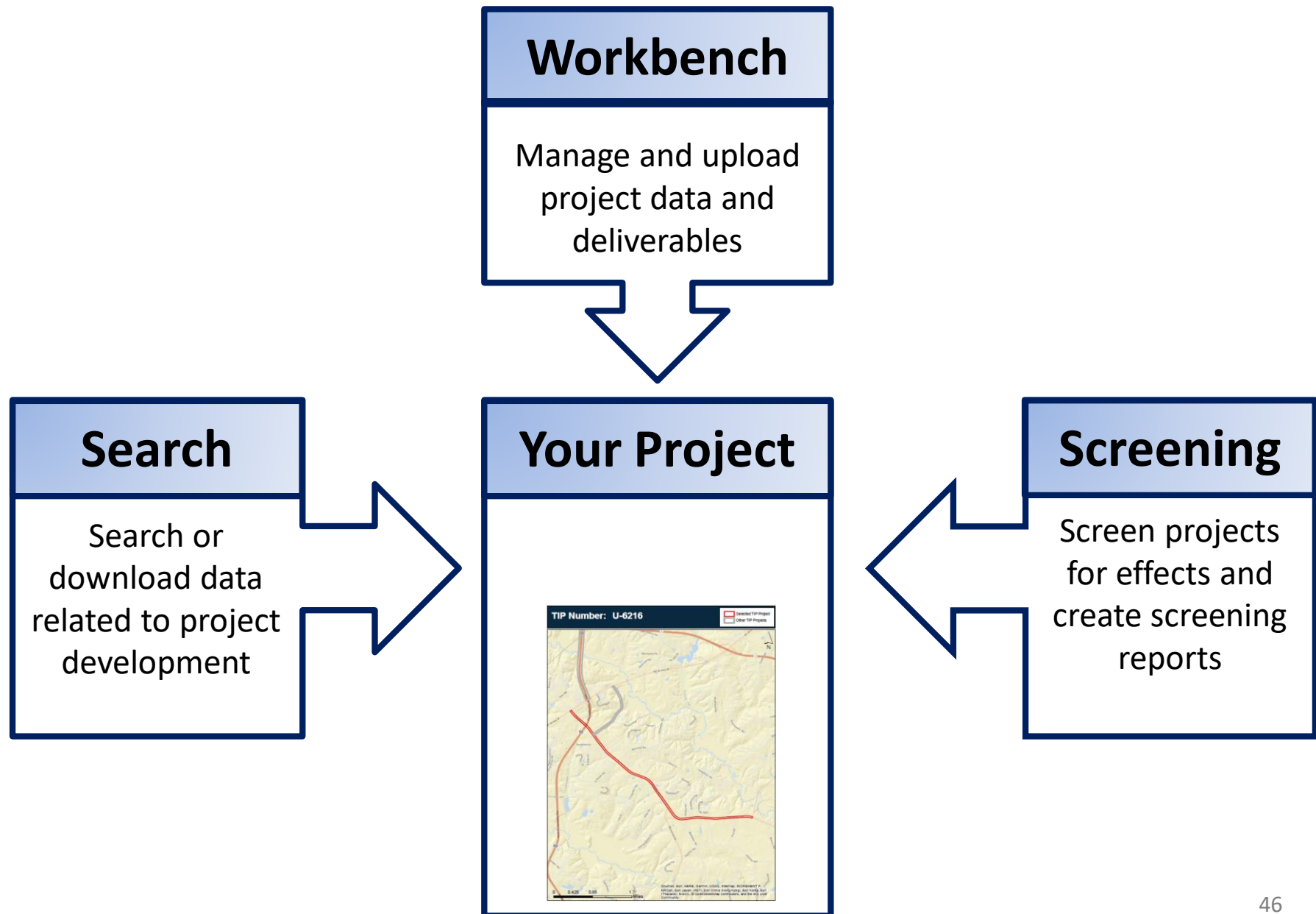
- **Why is it important?**
  - Necessary for Process Improvements
  - Takes advantage of advanced technology

It will not work if you don't participate.

Questions?

ATLAS@ncdot.gov

Wrap Up

Workbench

Manage and upload project data and deliverables

Search

Search or download data related to project development

Your Project

TIP Number: U-6216

Screening

Screen projects for effects and create screening reports

Important Notes on ATLAS

We are:

- Not eliminating field work or jobs
- Pushing more work earlier in the process to help scheduling, budgeting and scoping
- Helping to deliver better projects by:
  - Improving GIS data and management
  - Improving processes

Additional Resources

ATLAS Screening Tool

About   Additional Resources   Help

Additional Resources

Resource Name	Resource Description
ATLAS Search Tool Tip Sheet	This document highlights key functionality of the Search Tool.
ATLAS Screening Tool Tip Sheet	This document highlights key functionality of the Screening Tool.
ATLAS Workbench Tip Sheet	This document highlights key functionality of the Workbench.
ATLAS User Guide	This document provides detailed descriptions of user functionality in the Search, Screening and Workbench applications.
ATLAS Standards	This document outlines Data Standards that were developed by the ATLAS team for better management, sharing and integration of data across the many subject areas. Standards must be adhered to when uploading documents and data to the ATLAS Workbench.
How a road gets built	NCDOT overview of "How a road gets built"
NCDOT State Transportation Improvement Program	Access information about the NCDOT State Transportation Improvement Program
NCDOT Feasibility Study Documents	Access NCDOT Feasibility Study Documents
NCDOT Scoping SharePoint Home	Access NCDOT Scoping SharePoint Home
NCDOT Preconstruction SharePoint Home	Access NCDOT Preconstruction SharePoint Home

Open Lab